



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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January 7, 1985

TO: The Board of Oil, Gas and Mining
FROM: Susan C. Linner, Reclamation Biologist/Permit Supervisor
RE: Executive Summary, Sunshine Mining Company, Burgin Project,
ACT/049/009, Utah County, Utah

Attached for your information is an Executive Summary for the above-referenced mining project. A Surety Bond, in the required amount, will be available for your approval and signature at the regular Board meeting. The required public notice has been given. The 30-day public comment period will expire January 25, 1985.

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EXECUTIVE SUMMARY

Mine Name: Burgin Project I. D. No. ACT/049/009
Operator: Sunshine Mining Company County: Utah
P. O. Box 250 New/Existing: Both
Eureka, Utah 84628 Mineral Ownership: Private
Telephone: (801) 433-6854 Surface Ownership: Private
Contact Person: Leon J. Munyan Lease No. (s): N/A
Life of Mine: Unknown Permit Term: 10 Years
Legal Description: Sections 13, 14, 15, 18, 22 and 28, Township 10 South, Range 2
West
Mineral(s) to be Mined: Silver, Lead, Zinc and Gold
Mining Methods: Underground Development
Acres to be Disturbed: 110
Present Land Use: Mining
Postmining Land Use: Mining, grazing
Variances from Reclamation Standards (Rule M-10) Granted: None

Soils and Geology:

Soil Description: Sandy gravelly loam soils derived from volcanic parent
material or a mixture of sedimentary rocks; soils are generally well drained and
moderately permeable pH: 7.5-8.4
Special Handling Problems: None
Geology Description: Paleozoic rocks; formations are Tintic quartzite, Ophir
formation and Teutonic limestone.

Hydrology:

Ground Water Description: Heavy inflows of hot salty groundwater have made
mining the ore body difficult in the past; mine dewatering of approximately 9,000
GPM necessary
Surface Water Description: Intermittant drainage system through the permit area
numerous springs indicate two aquifers, one hot and salty, the other cool and
fresh
Water Monitoring Plan: Two wells downgradient of tailings pond; monitoring of
mine water discharge as per EPA requirements

Ecology:

Vegetation Type(s); Dominant Species: Pinyon-Juniper, Sagebrush-Grass,
Greasewood-grass; pinyon pine, Utah juniper, Wyoming big sage, Douglas
rabbitbrush, greasewood, galleta grass, sand dropseed
Percent Surrounding Vegetative Cover: 5-60%
Wildlife Concerns: None
Surface Facilities: Mill site and associated facilities, three mine shafts,
tailings pond, and mine water settling ponds
Mining and Reclamation Plan Summary: Attached

Surety:

Amount: \$737,000
Form: Surety Bond
Renewable Term: 10 years

During Operations:

1. The tentative approval covers operations at the Trixie Mine Shaft, Hunter Shaft (to be constructed), and the Burgin Mill site facilities including a tailings pond to be constructed and a series of settling ponds for mine water discharge.
2. Most of the area is previously disturbed, but on areas of proposed new disturbance topsoil will be salvaged and saved to use for reclamation. Erosion control measures will be implemented.
3. A 35' high tailings dam will contain a pond which will eventually cover 25 acres. The reservoir will be clay-lined to prevent percolation and equipped with monitoring wells to sample groundwater. A drain system with pump will capture fugitive leachates and return them to the pond.
4. A mine water discharge of 9,000 gallons per minute will travel through an intermittent drainage channel 3.5 miles to the six settling ponds. Water will eventually percolate into deep alluvial valley fills. Sampling has shown the quality of this water to be non-deleterious.
5. An NPDES discharge permit has been applied for.
6. A surety bond sufficient to cover the State's cost to reclaim the area will be posted prior to final approval.

Following operations:

1. All buildings, facilities and utilities will be removed. Shafts will be closed and fenced.
2. Topsoil will be spread, or compacted soil will be ripped in areas where no topsoil was saved. All reclaimed areas will be seeded with a mix of species adapted to the area. Test plots are being conducted to determine the best seed mix to use to reclaim waste rock dumps.
3. Excess dam material will be pulled onto tailings, the area topsoiled and reseeded. Dikes of the settling ponds will be leveled and the area reseeded.
4. Revegetation success will be monitored for three years. Water monitoring wells will continue to be sampled for three years, then closed with cement plugs.
5. The County road and Denver and Rio Grande Railroad line will remain in place.

The Division of Oil, Gas and Mining plans to approve the permit with the following stipulations:

1. Bonding Requirements; Rule M-5-JRH

The applicant shall resubmit their bond cost estimate schedule with a complete account of all areas within the Mine Permit Area, including the total permit area, the area currently disturbed, the proposed areas to be disturbed, and the acreage and areas to be reclaimed. Cost estimates for reclamation shall also be revised accordingly. The applicant must also indicate if the Apex bond currently held by the Division is to be revised and included in the the bond estimate, or held as a separate area. The applicant shall resubmit their bond estimate within 15 days after publishment of this notice.

2. Revegetation; Rule M-10(12)-LK

The seed mix for final reclamation of the waste dumps will be revised to a more diverse mixture of grasses, forbs and shrubs. Determination of the seed mix will be made after analysis of the Apex test plots. Seed mix revision will be submitted to the Division for approval prior to December 31, 1985.

3. Rule M-10(14)-1-TLP

Immediately after redistribution of soil materials which comprise the dikes of the current settling ponds all such soil material shall be sampled. The objectives of sampling shall be to: 1) Detect trouble spots (high salt and/or sodium; 2) to serve as a basis for final fertilizer recommendations as well as for other amendments such as organic materials. A sampling grid capable of an intensity achieving the above objectives shall be proposed for approval within ninety (90) days of permit approval.

4. Rule M-10(14)-2-TLP

In the Hunter Shaft and tailings pond area to be reclaimed a similiar (it may be of lower intensity) sampling grid shall be employed to serve as a basis for fertilizer recommendations.

5. Rule M-10(14)-3-TLP

The incorporation of both fertilizer and organic matter where applicable shall be to a depth of six (6) inches.

6. Rule M-10(14)-4-TLP

Sunshine Mining Company shall separately remove and stockpile subsoil (C horizon) material at the proposed tailings dam location. The removal of such soil shall be performed under the direct supervision of a qualified individual.

7. Rule M-10(12)-1-TLP

If favorable revegetation results are not evident at the Burgin Mill complex by July, 1987 the operator shall consult with the Division for the purpose of devising a test plot program aimed at providing for successful reclamation. Such a program shall be implemented by Fall of 1987.

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